

AMENDED CLAIMS

Claims 1-11 (Cancelled)

12.(New) A method for sterilizing containers (2) made of a plastic material and for filling the containers with liquid substances comprising the steps of:

feeding said containers (2) in a succession along a feeding path (P), so as to bring the containers (2) into a covering structure (S) defining a closed aseptic environment containing a one-block apparatus for sterilizing and filling the containers;

sterilizing said containers (2) in a first portion (6) of said one-block apparatus (1), situated along a first section (T) of said path (P), said sterilizing step including:

diffusing a sterilized substance inside each container (2) fed along a first part (T1) of said first section (T);

diffusing pressurized steam inside each container (2), while moving the container along a second part (T2) of said first section (T) located after said first part (T1); and drying the inside of the container (2) by feeding filtered sterile air through an opening of the container while moving the container forward along a third part (T3) of said section (T);

weighed filling of said sterilized containers (2) with said liquid substance; and,

subsequently closing each filled and weighed container with a pre-sterilized plug/cap, in a second portion (12) of said one-block apparatus (1), situated along a second section (TR) of said path (P), located after the first section (T).

13.(New) The method as claimed in claim 12 wherein said sterilizing substance is hydrogen peroxide.

14.(New) The method as claimed in claim 12 wherein said covering structure (S) has a wall (W) separating said second portion (12) from said first portion (6), and further comprising circulating a laminar flow of filtered/purified air inside said second portion (12).

15.(New) The method as claimed in 12 wherein said containers (2) are made of low density polyethylene.

16.(New) The method as claimed in claim 12 wherein said filling substance is a liquid substance used in food.

17.(New) A one-block apparatus (1) for sterilizing and filling containers (2) made of a plastic material with liquid substances, the one-block apparatus comprising:

a unit (7) for sterilizing and drying an the inside of each container (2);

a unit (13) for weighted filling of each container (2) with said liquid substances; and a unit (18) for closing each filled container (2) with a closing plug/cap;

said one-block apparatus being contained in a covering structure (S) for defining an aseptic environment;

said sterilizing unit (7) and said weighed filling unit (13) being separated by a wall (W) of the covering structure (S);

means for subjecting said filling unit (13) to a circulation or laminar flow of filtered/purified air;

said sterilizing unit (7) including:

a rotating turret (8) having a plurality of work stations (9), each of said work stations (9) including plier means (10) for holding and overturning the containers (2) and for bringing each container from a position with an opening turned upwards to a position in which the opening is turned downwards, and vice-versa; and,

nozzle means (11) connected to said plier means (10), the nozzle means entering said opening of said containers (2) to discharge a fluid inside of the containers, to sterilize an inside of said container while the container is held and transported by said plier means.

18.(New) An apparatus as claimed in claim 17 wherein said nozzle means (11) have a triple inner canalization (11a, 11b), a first canalization of each of said nozzle means (11) being connected to a tank of a sterilizing substance to diffuse said sterilizing substance inside said containers (2), second and third canalizations (11b) of each of said nozzle means (11) being connected alternately with a source of pressurized steam and with a source of purified sterile air, to wash and dry the inside of said containers (2) before said containers are filled.

19.(New) An apparatus as claimed in claim 17 wherein said containers (2) are made of low density polyethylene.

20. (New) An apparatus as claimed in claim 17 wherein said filling unit (13) fills the containers (2) with a liquid substance used in food processing.